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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,190	02/11/2004	Kiyohiro Obara	520.39602CX1	1622
24956	7590	02/08/2006	EXAMINER	
MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C. 1800 DIAGONAL ROAD SUITE 370 ALEXANDRIA, VA 22314			ZAMAN, FAISAL M	
			ART UNIT	PAPER NUMBER
			2112	

DATE MAILED: 02/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/775,190	Applicant(s) OBARA, KIYOHIRO	
	Examiner Faisal Zaman	Art Unit 2112	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/780,411.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see Pages 9-17, filed 12/13/2005, with respect to the rejection(s) of claim(s) 1-15 under 35 USC 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Aruga (U.S. Patent No. 6,542,954).

The objection to Claim 15 found on Page 2 of the Office Action dated 10/25/2005 has been withdrawn.

The objection to Claim 1 found on Page 2 of the Office Action dated 10/25/2005 stands, since Applicant did not address the issue at hand.

Claim Objections

2. **Claim 1** is objected to because of the following informalities: in Line 5, the word "to" should be placed between the terms "a switch apparatus connectable" and "the first storage system". Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. **Claims 1-15** are rejected under 35 U.S.C. 102(e) as being anticipated by Aruga (U.S. Patent No. 6,542,954).

Regarding Claims 1 and 15, Aruga discloses a system comprising:

A first storage system for storing data (Figure 7, item 4(1,1), Column 3, lines 8-16);

Wherein a host computer performs read and write operations on the data stored in the first system (Column 3, lines 38-48); and

A switch apparatus connectable the first storage system (Figure 7, item 3-1, [also Figure 3, item 3-1], Column 3 line 53 – Column 4 line 32, and Column 5 line 64 – Column 6 line 7),

Wherein the first storage system includes a plurality of ports connectable to the switch apparatus (Figure 7, see connection between item 4(1,1) and item 3-1, Column 5, lines 51-55),

Wherein the switch apparatus comprises:

A first port connectable to the first storage system (Figure 7, see connection between item 4(1,1) and item 3-1, Column 5, lines 51-55),

A second port connectable to the host computer (Figure 7, see connection between item 1-1 and item 3-1; host computer is connected to item 1-1, Column 3, lines

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17-23, ie. the host computer is connected to the switch controller 3-1 through disk array controller 1-1),

A third port connectable to a second storage system (Figure 7, item 4a, Column 5, lines 42-46) for storing data (Figure 7, see connection between item 3-1 and item 4a, switch controller 3-1 is connected through spare disk drive unit controller 19 to spare disk drive unit 4a), and

A plurality of processing apparatuses connectable to the first, second, and third ports (Figure 7, items 4(1,1), 1-1, and 4a, Column 5, lines 39-63).

Wherein the plurality of processing apparatuses convert a first protocol which is used in a first connection between the plurality of ports of the first storage system and the first port of the switch apparatus and which is used in a second connection between the host computer and the second port of the switch apparatus to a second protocol which is used in a third connection between the second storage system and the third port of the switch apparatus, when the switch apparatus transfers data from the first storage system to the second storage system (Column 5 line 51 – Column 6 line 7).

Regarding Claim 2, Aruga discloses wherein the switch apparatus converts the second protocol to the first protocol when the switch apparatus transfers data from the second storage system to the first storage system (Column 6, lines 38-48).

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Regarding Claim 3, Aruga discloses wherein the first protocol is a SCSI protocol and the second protocol is a fiber channel protocol (Column 1, lines 14-17 and Column 2, lines 14-22).

Regarding Claim 4, Aruga discloses wherein the plurality of processing apparatuses of the switch apparatus execute a migration of data from the first storage system to the second storage system via the first port and the third port (Figure 7, see connection between item 4(1,1) and item 3-1 and connection between item 3-1 and item 4a, Column 5 line 51 – Column 6 line 7).

Regarding Claim 5, Aruga discloses wherein the switch apparatus further comprises a memory in which information for converting the first protocol to the second protocol and information for converting the second protocol to the first protocol are stored (Column 3 line 64 – Column 4 line 13, ie. the “table”).

Regarding Claim 6, Aruga discloses wherein the migration is executed while the host computer is accessing the first storage system (Column 6, lines 28-37).

Regarding Claim 7, Aruga discloses wherein the switch apparatus converts a command for responding to the first protocol to the first storage system, said command being transferred by the host computer, to a command for responding to the second

protocol to the second storage system to transfer the converted command to the second storage system (Column 5 line 51 – Column 6 line 7).

Regarding Claims 8-14, all the same elements regarding the switch apparatus of Claims 1-7 are disclosed, therefore the supporting rationale used in the rejection of Claims 1-7 apply equally as well to Claims 8-14.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Zhang (U.S. Patent No. 6,108,345) discloses a configurable Wan/Lan bridge. Ofek et al. (U.S. Patent No. 6,240,486) discloses a system and method for on-line, real time, data migration. Parks et al. (U.S. Patent No. 6,598,174) discloses a method and apparatus for storage unit replacement in non-redundant array. Nagasawa et al. (U.S. 6,240,494) discloses a subsystem replacement method. Ofek (U.S. 5,896,548) discloses a data transferring system having foreground and background modes and upon detecting significant pattern of access in foreground mode to change background mode control parameters. Hoese et al. (U.S. Patent No. 5,941,972) discloses a storage router and method for providing virtual local storage.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Faisal Zaman whose telephone number is 571-272-6495. The examiner can normally be reached on Monday thru Friday, 9 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rehana Perveen can be reached on 571-272-3676. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

FMZ


Khanh Dang
Primary Examiner